

REMARKS

Claims 1, 3-9, 11-16, and 27-32 remain in the application for further prosecution. Claims 1, 4, 9, and 27 have been amended to distinguish the invention from the cited references. The word “uniformly” has been added to Claims 1, 4, and 9 for consistency with Claim 27 and to distinguish these claims from withdrawn Claim 21, where a sequence of reagents is used.

Provisional rejection for double patenting

Claims 1-8 have been rejected for potential double patenting over Claims 1-6 and 8 of co-pending application 10/608,671. This rejection may be overcome by a terminal disclaimer, which will be filed once the present claims have been found allowable.

Rejection Under 35 USC §103(a)

Claims 1, 3-6 and 11-14 (also 9?) have been rejected under 35 USC §103(a) as unpatentable (i.e. obvious) over admitted prior art (the preamble to claim 1) in view of the Peters ‘126 patent. As the Examiner concedes, the admitted prior art does not teach a uniform array of posts. For this, he adds Peters. However, the Applicant’s invention employs and claims an array of posts disposed in a manner contrary to that of Peters, and which function differently.


Peters addressed the problem of how liquid could be removed from the exit of capillaries (see col. 1, lines 38-41). As he noted, surface tension can hold liquid in a capillary and prevent it from exiting. Peters solution was to employ wedge-shaped cut outs positioned at the exit end of the capillary. The design of these wedge-shaped cutouts was intended to provide an increase in the capillary force, which Peters refers to as providing a “suction action” at column 3, lines 56-60. Therefore, the wedge-shaped cutouts become effectively an extension of the capillary that is to be emptied. In contrast the Applicant’s do not require the use of wedge-shaped cutouts to empty capillaries. They are present in one embodiment of the invention, but even in that instance, they are not positioned at the exit of a capillary. The uniform array of posts in Claim 1 are disposed at a right angle to the direction of liquid flow, as shown in fig. 4, so that the liquid entering the substrate-containing well from a capillary passageway is directed uniformly over the substrate. The wedge-shaped cutouts need not be present, but, if present, they would not be positioned at the exit of the inlet capillary. Fig. 7-8 of Peters illustrates the difference. Liquid is placed on a separating membrane, including capillaries, which is supported on projections 22, 23 containing the wedge-shaped cutouts. By this arrangement, Peters positions the wedge-shaped cutouts to empty the

membrane capillaries. If the projections were not in contact with the membrane capillaries, they would not be emptied and Peter's objective would not be achieved. In the Applicant's invention, the entry capillary would be emptied by another means, such as applying pressure or vacuum, and thereafter the liquid distributed over the substrate by passing it around an array of posts positioned at a right angle to the direction of liquid flow. Thus, the projections of Peters do not correspond to the Applicant's posts. In no sense is the Applicant's array of posts obvious from the teachings of Peters. Accordingly, the claims as amended are believed to be patentable over the admitted prior art in combination with Peters.

Claims 7, 8, 15 (also 16?) and 27-32 have been rejected under 35 USC §103(a) as unpatentable over the admitted art and Peters in view of Columbus '029. These claims include the use of ramps and grooves or weirs to further direct the flow of liquid across the substrate in the well. Columbus has been discussed in detail in previous amendments, particularly in the amendment filed September 16, 2005. Columbus discloses a very different device that does not direct liquid over a substrate by passing it through an array of posts disposed at a right angle to the liquid flow. Combining Columbus with the admitted art would not produce the Applicant's invention, with or without the projections of Peters.

In view of the amendments and remarks, the claims are believed to be in condition for allowance. If the Examiner believes that additional amendments may be needed, he is invited to contact the Applicants' attorney at the telephone number provided below.

Respectfully submitted,



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